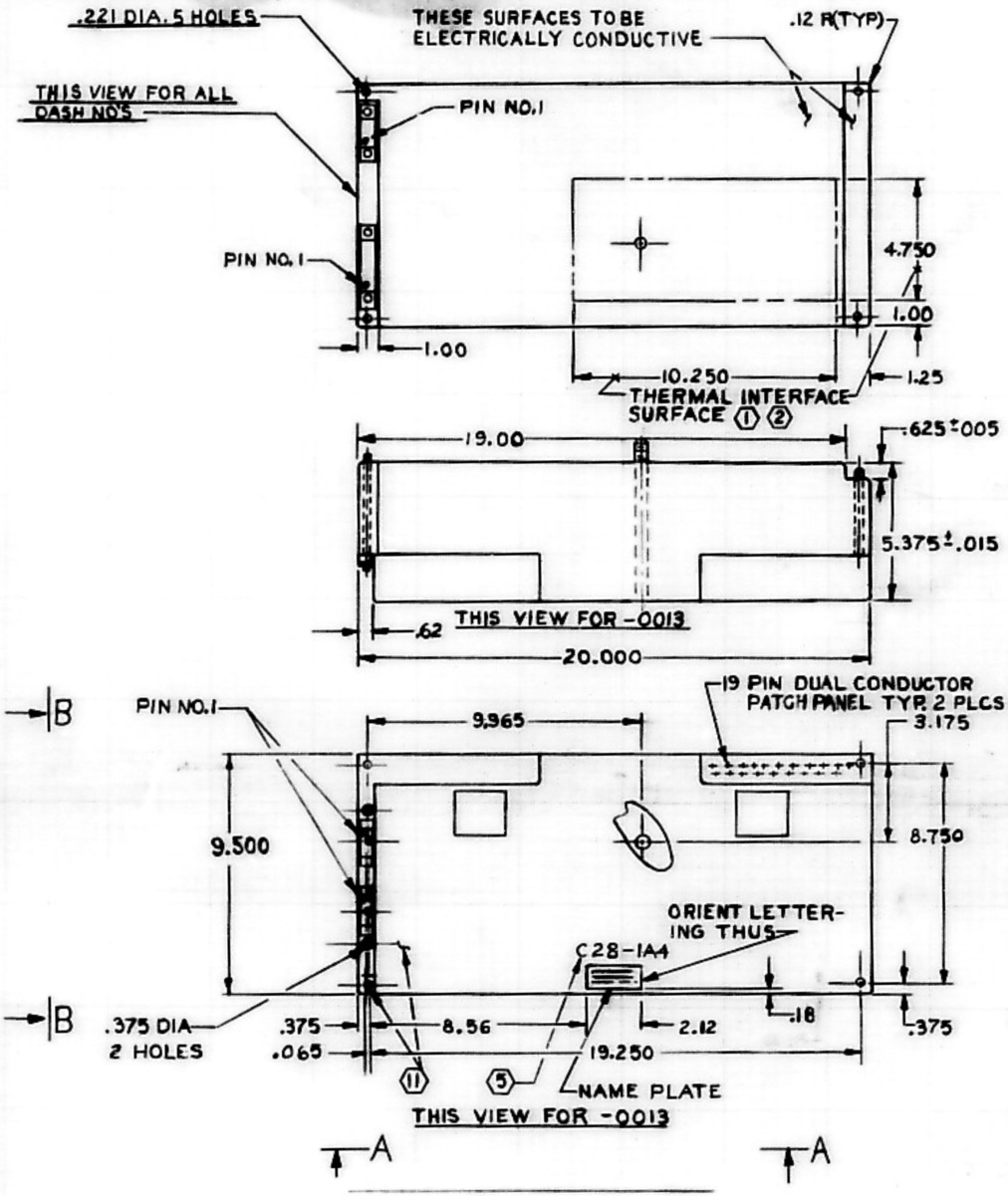


SEE ASL FOR PROCUREMENT DATA

PROCUREMENT SPEC: MC435-0013E

NO CHANGES WHATSOEVER CAN BE MADE TO THIS ITEM WITHOUT THE EXPRESSED WRITTEN PERMISSION OF THE BUYER

TOLERANCES, EXCEPT AS NOTED						✓ SIGNIFIES SURFACE ROUGHNESS PER MIL - STD - 10
FRACTIONS ± 1/32	DECIMALS XX = ± .03	DRILLED	.040 TO .1285: + .002, — .001	33/64 TO 3/4: + .005, — .001		
ANGLES ± 1/2°	XXX = ± .010	HOLE TOLERANCES	.136 TO .228: + .003, — .001	49/64 TO 1: + .007, — .001		
			.234 TO 1/2: + .004, — .001	1-1/64 TO 2: + .010, — .001		

DR	C.E. SIMMONS	12-17-64
CHK		1-22-65
APPD		1-23-65
APPD		2-9-65

NORTH AMERICAN AVIATION, INC.
SPACE and INFORMATION SYSTEMS DIVISION
12213 LAKEWOOD BLVD.
DOWNEY, CALIFORNIA

DATA STORAGE EQUIPMENT (SPEC CONTROL DRAWING)

CONTROL PART

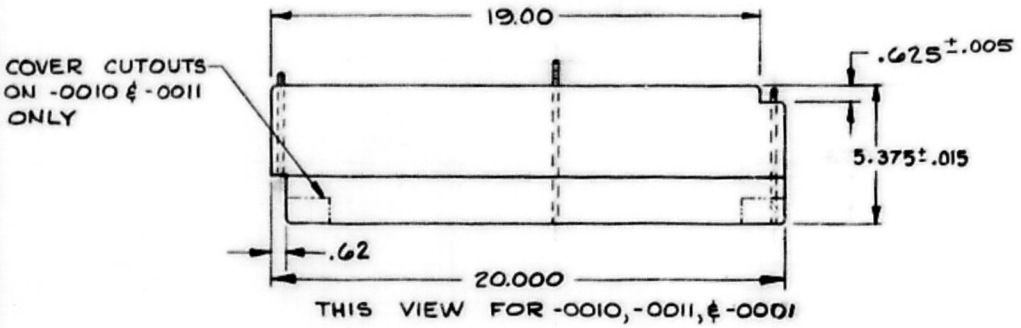
ME435-0013

SHEET 1 OF 14

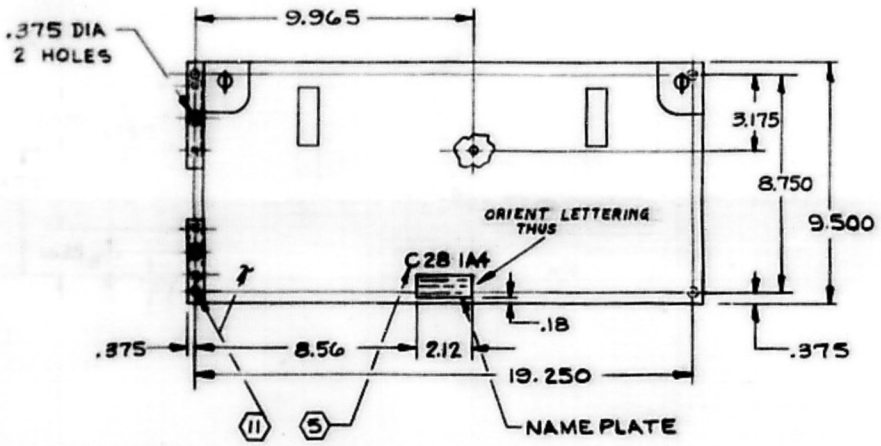
REVISED (K) REDRAWN 12-17-64 CES (J) GEN. REV. 7-28-64 F.K. (H) 1-2-64 R.D.M. (G) GEN. REV. 7-27-63 (F) ADDED C.T.P. MC 74-63 DIES. (E) GEN. REV. 5-1-63 M.H. (D) GEN. REV. 3-11-63 J.K. (C) ADDED AMEND 1 TO MC 3-1-63 J.K. (B) REDRAWN 1-19-63 DWG

(S) SEE REV REC SHT "S" 4-22-66 NDS (R) MC REVISION E 1-10-66 CJTR (P) SEE REV REC SHT "P" 4-20-65 (N) SEE REV. REC. SHT. "N" 4-20-65 (M) SEE REV. REC. SHT. "M" DATED 4-22-65 (L) SEE REV. 4-9-65 REC. SHT. "L"

E.O. 490133



THIS VIEW FOR -0010, -0011, & -0001



THIS VIEW FOR -0010 & -0011

A A

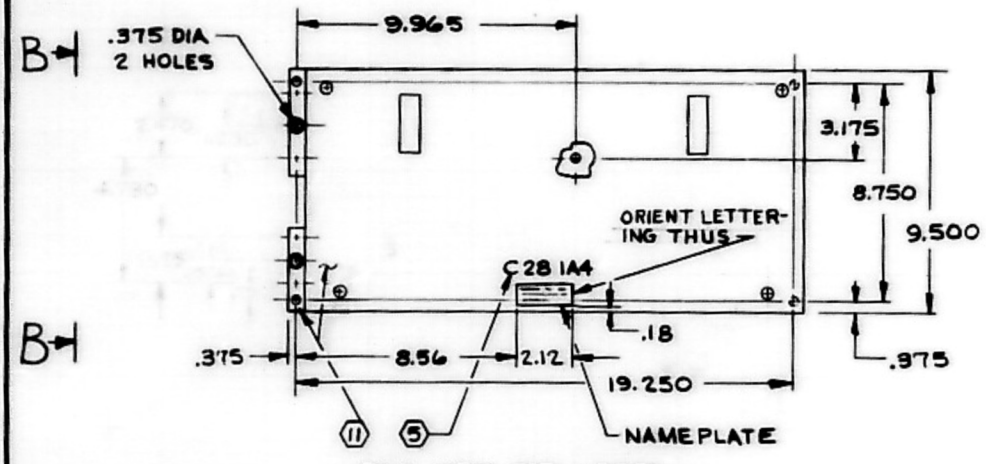
REVISED (J) GEN REV 7-28-64 PR (K) SEE SHT 1 12-15-64 (L) SEE SHT 1 4-9-65 RNB (M) SEE REV. REC. SHEET "M" DATED 6-23-65 DRP (N) SEE SHT 1 7-20-65 RNB (P) 9/12/65 SEE SHT 1 (R) 1-10-66 JTR (S) SEE SHT 1 4-13-66 MDS

E.O. 490133

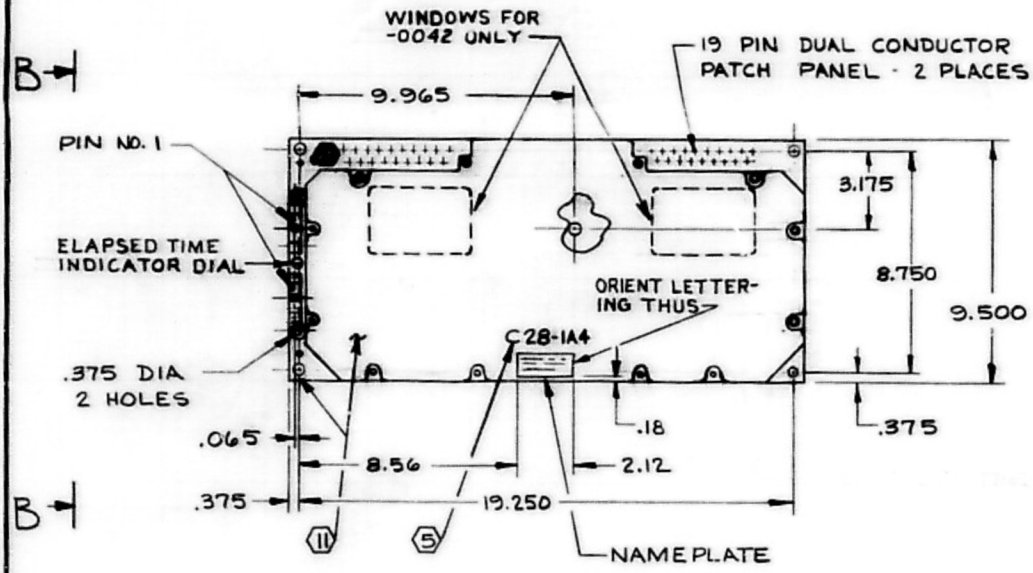
TOLERANCES, EXCEPT AS NOTED						✓ SIGNIFIES SURFACE ROUGHNESS PER MIL-STD-10
FRACTIONS ± 1/32	DECIMALS XX = ± .03	DRILLED HOLE TOLERANCES	.010 TO .125: + .002, — .001	.126 TO .250: + .003, — .001	.251 TO 1/2: + .004, — .001	33/64 TO 3/4: + .005, — .001
ANGLES ± 1/2°	XXX = ± .010				1-1/64 TO 2: + .010, — .001	49/64 TO 1: + .007, — .001

DR	H. CONNER	6-11-64	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION 12214 LAKEWOOD BLVD. DOWNEY, CALIFORNIA	CONTROL PART
CHK		1-22-65		
APPD		1/23/65	DATA STORAGE EQUIPMENT (SPEC CONTROL DRAWING)	ME435-0013
APPD		2-4-65		SHEET 2

FORM 933-H REV. 1-61



THIS VIEW FOR -0001



THIS VIEW FOR -0020, -0030, 0042, -0043, -0044

REVISED
(J) GEN REV 7-28-64 PR
(K) SEE SHT 1 12-15-64
(L) SEE SHT 1 4-9-65 RHB
(M) SEE REV. REQ. SHEET DATED 6-23-65
(N) SEE SHT 1 4-20-65 RHB
(P) SEE SHT 1 4-16-65
(R) SEE SHT 1 1-10-66 JR
(S) SEE SHT 1 4-22-66 NDS

TOLERANCES, EXCEPT AS NOTED
FRACTIONS ± 1/32 .XX = ± .03
ANGLES ± 1/2° DECIMALS .XXX = ± .010

DRILLED HOLE TOLERANCES			
.040 TO .1285:	+ .002, — .001	33/64 TO 3/4:	+ .005, — .001
.136 TO .228:	+ .003, — .001	49/64 TO 1:	+ .007, — .001
.234 TO 1/2:	+ .004, — .001	1-1/64 TO 2:	+ .010, — .001

✓ SIGNIFIES SURFACE ROUGHNESS PER MIL-STD-10

DR	H. CONNER	6-22-64
CHK		1-22-65
APPD		1/23/65
APPD		2-9-65

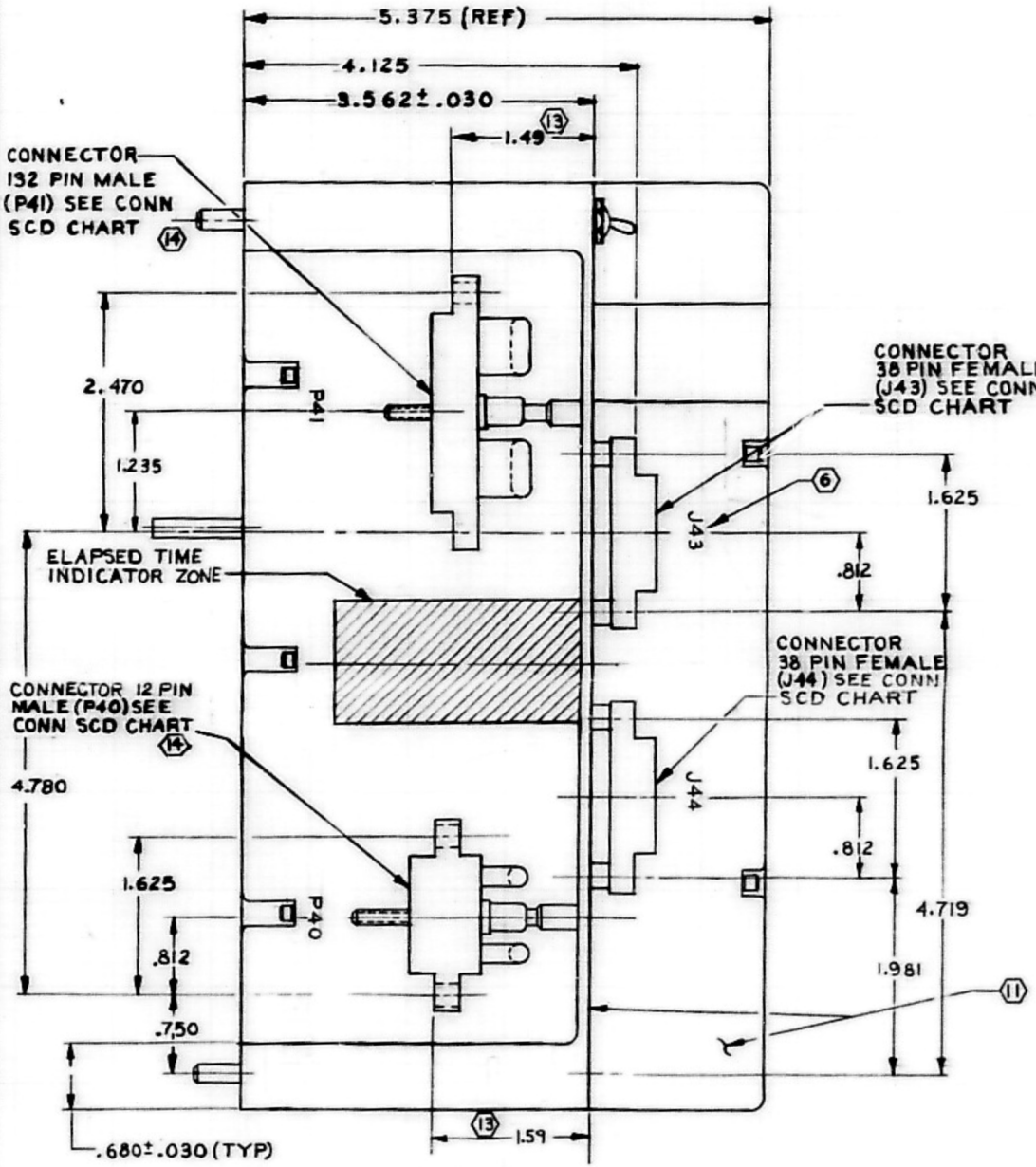
NORTH AMERICAN AVIATION, INC.
SPACE and INFORMATION SYSTEMS DIVISION
12214 LAKEWOOD BLVD.
DOWNEY, CALIFORNIA

DATA STORAGE EQUIPMENT
(SPEC CONTROL DRAWING)

CONTROL PART
ME 435-0013
SHEET 3

FORM 925-M REV. 1-61

THIS VIEW FOR -0020,0030,0042,0043,0044



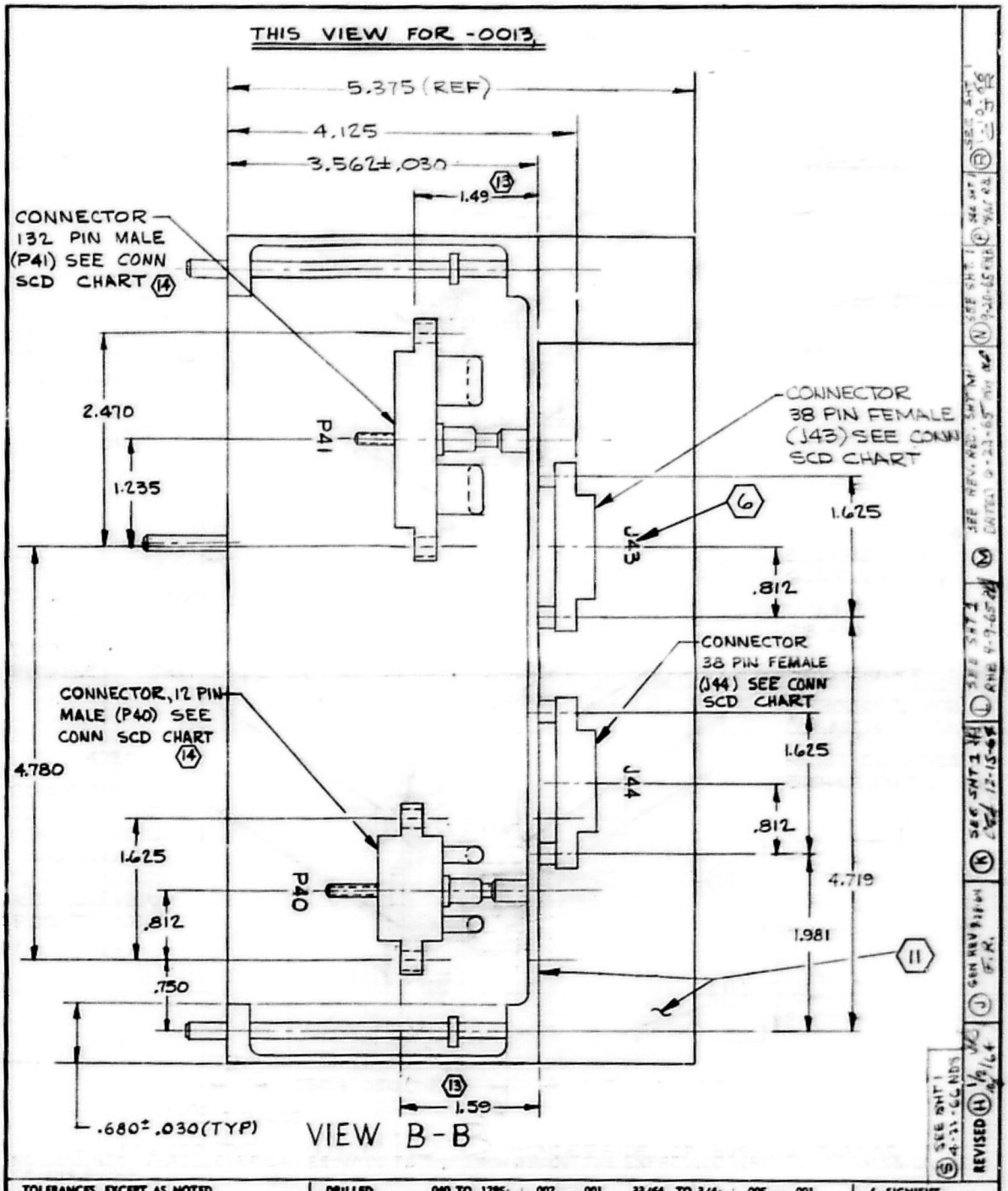
VIEW B-B

REVISED
(K) SEE SHT 1 DR. 12-16-64
(L) SEE SHT 1 KNB 4-9-65
(M) SEE REV. REC. SHT. "N" DATED 5-23-65
(P) SEE SHT 1 4-26-65
(R) SEE SHT 1 7-10-65 CTR
(S) SEE SHT 1 4-11-66 MW

TOLERANCES, EXCEPT AS NOTED			DRILLED HOLE TOLERANCES			√ SIGNIFIES SURFACE ROUGHNESS PER MIL-STD-10
FRACTIONS ± 1/32	XX = ± .03		.040 TO .1285: + .002, — .001		33/64 TO 3/4: + .005, — .001	
ANGLES ± 1/2°	DECIMALS XXX = ± .010		.136 TO .228: + .003, — .001		49/64 TO 1: + .007, — .001	
			.234 TO 1/2: + .004, — .001		1-1/64 TO 2: + .010, — .001	

DR	C.E. SIMMONS	12-16-64	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION 12214 LAKEWOOD BLVD. DOWNEY, CALIFORNIA	CONTROL PART
CHK		1-22-65		
APPD	S. Spray	1/23/65	DATA STORAGE EQUIPMENT (SPEC CONTROL DRAWING)	ME435-0013
APPD	P.O. Baker	2-9-65		SHEET 4

FORM 923-M REV. 1-61



TOLERANCES, EXCEPT AS NOTED		DRILLED	.040 TO .1285: + .002, — .001	33/64 TO 3/4: + .005, — .001	✓ SIGNIFIES
FRACTIONS ± 1/32	.XX = ± .03	HOLE	.136 TO .228: + .003, — .001	49/64 TO 1: + .007, — .001	SURFACE ROUGHNESS
ANGLES ± 1/2°	DECIMALS .XXX = ± .010	TOLERANCES	.234 TO 1/2: + .004, — .001	1-1/64 TO 2: + .010, — .001	PER MIL - STD - 10

DR	HOBECK	1-2-64
CHK		1-22-65
APPD		1/23/65
APPD		2-9-65

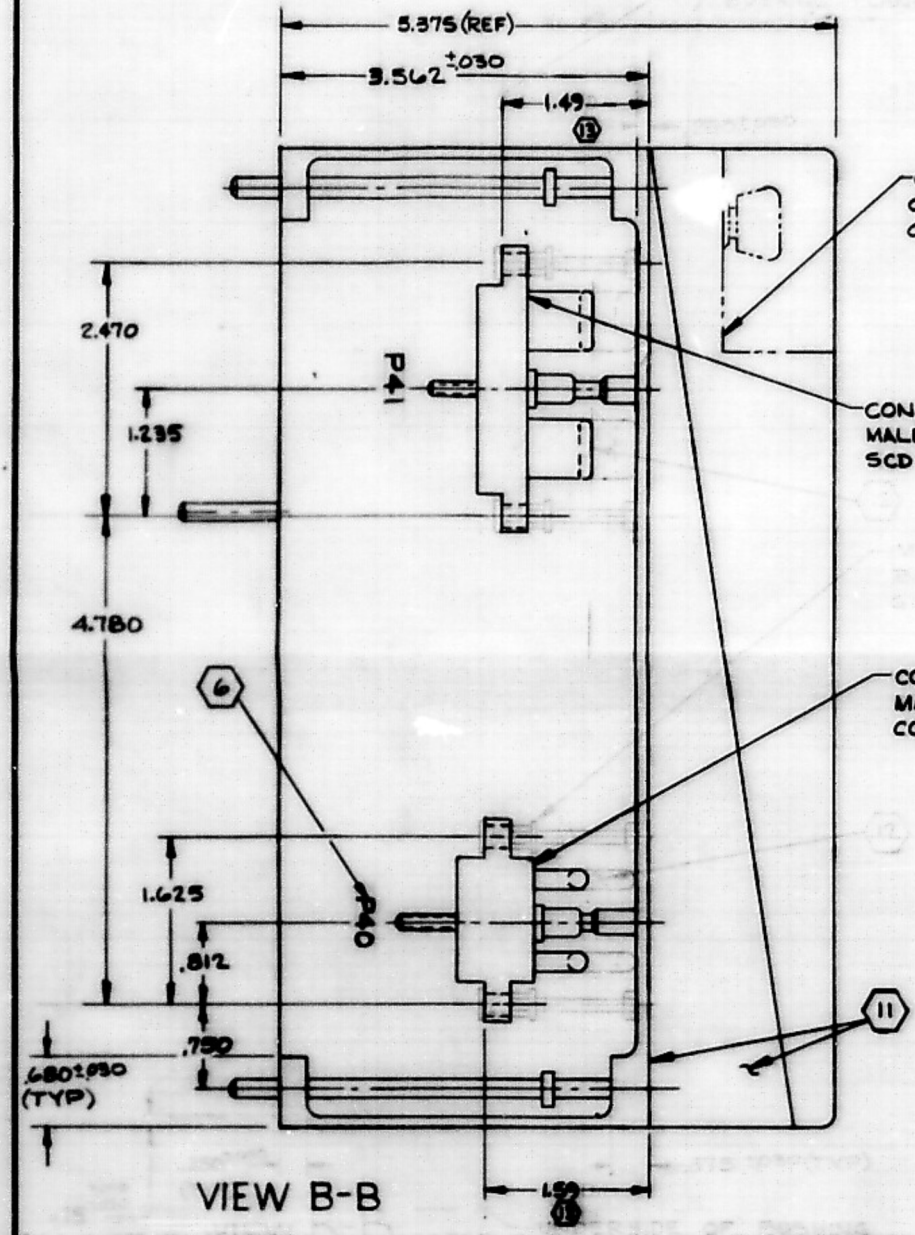
NORTH AMERICAN AVIATION, INC.
SPACE and INFORMATION SYSTEMS DIVISION
12214 LAKEWOOD BLVD.
DOWNEY, CALIFORNIA

DATA STORAGE EQUIPMENT
(SPEC CONTROL DRAWING)

CONTROL PART
ME435-0013
SHEET 5

FORM 925-M REV. 1-61

THIS VIEW FOR -0010, -0011, -0001



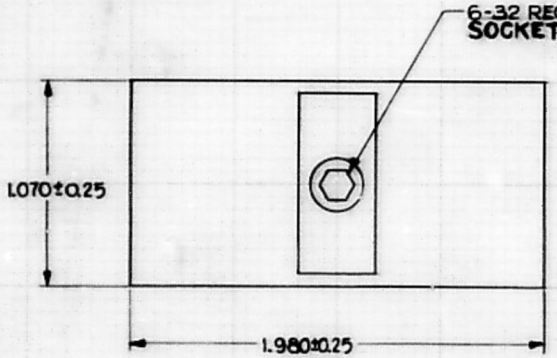
VIEW B-B

REVISED (J) GIN REV. (K) SEE SHT 1 (L) SEE SHT 1 RWB 4-9-65 (M) SEE REV. REC. SHT. 1 DATED 6-23-65 (N) SEE SHT. 1 9-20-65 RWB (P) SEE SHT. 1 (S) SEE SHT 1 4-22-66 NDS

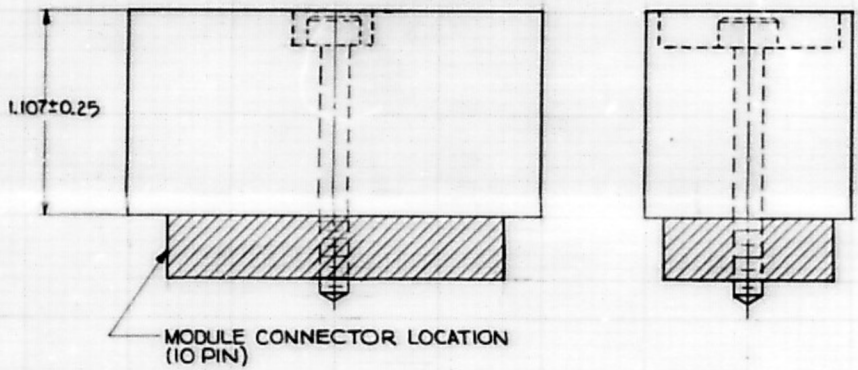
TOLERANCES, EXCEPT AS NOTED		BEND	.010 TO .125: ± .005 — .000	25/64 TO 3/4: ± .015 — .000	✓ SURFACES
FRACTIONS ± 1/32	.XX - ± .03	HOLE	.126 TO .250: ± .005 — .000	49/64 TO 1: ± .017 — .000	SURFACE ROUGHNESS PER MIL-STD-10
ANGLES ± 1/2° DECIMALS	.XXX - ± .010	TOLERANCES	.254 TO 1/2: ± .010 — .000	1-1/64 TO 2: ± .010 — .000	

DR	H. CONNER	6-17-64	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION 12214 LAKEWOOD BLVD. DOWNEY, CALIFORNIA	CONTROL PART
CHK		1-22-65		
APPD		1/22/65	DATA STORAGE EQUIPMENT (SPEC CONTROL DRAWING)	ME 435-0013
APPD		2-4-65		SHEET 6

E.O. 490133



PULSE DURATION MODULATION (PDM) MODULE P/N 512-2816-020 (or equiv.)



NOTES:

1. THE PDM MODULE SHALL BE INSERTABLE INTO THE CONNECTOR SOCKET FOR THE ANALOG RECORD AMPLIFIER SPECIFIED IN MC 435-0013 EXCEPT THAT THE PDM MODULE SHALL CONNECT THE INPUT SIGNAL DIRECTLY TO THE APPROPRIATE HEADWINDING. A PRECISION 10 OHM RESISTOR SHALL BE PROVIDED TO MONITOR THE RECORD HEAD CURRENTS.

REVISED (K) SEE SHT 1 12-16-64 (L) SEE SHT 1 ANB 4-9-65 (M) SEE REV. REC. SHT "M" DATED 6-21-65 (N) SEE SHT. 1 9-20-65 (P) SEE SHT 1 (R) SEE SHT 1 (S) SEE SHT 1 4-22-66 NDS

TOLERANCES, EXCEPT AS NOTED									
FRACTIONS ± 1/32	DECIMALS .XX = ± .03	DRILLED HOLE TOLERANCES	.040 TO .128: + .002, — .001	.136 TO .228: + .003, — .001	.234 TO 1/2: + .004, — .001	33/64 TO 3/4: + .005, — .001	49/64 TO 1: + .007, — .001	1-1/64 TO 2: + .010, — .001	✓ SIGNIFIES SURFACE ROUGHNESS PER MIL-STD-10
ANGLES ± 1/2°	.XXX = ± .010								

DR	U.R. HORTON	12-21-64
CHK		1-22-65
APPD	J. Spray	1/23/65
APPD		2-9-65

NORTH AMERICAN AVIATION, INC.
SPACE and INFORMATION SYSTEMS DIVISION
12214 LAKEWOOD BLVD.
DOWNEY, CALIFORNIA

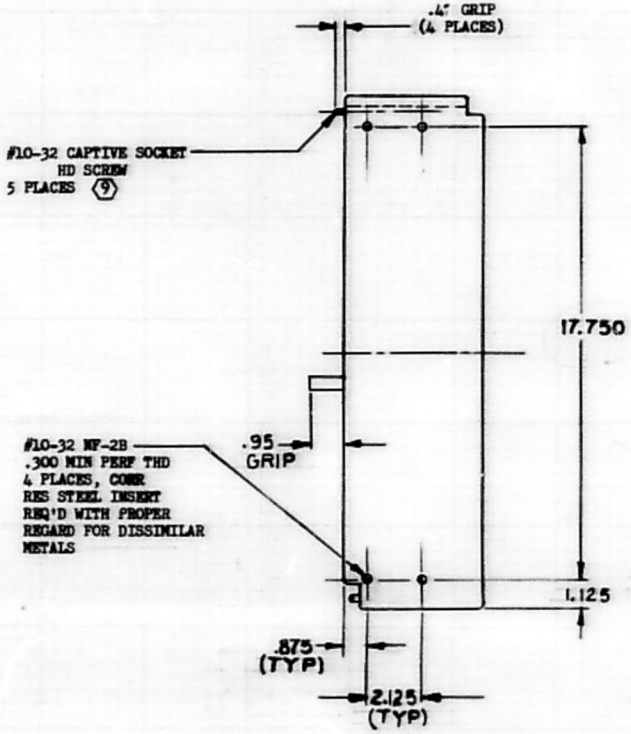
DATA STORAGE EQUIPMENT (SPEC CONTROL DRAWING)

CONTROL PART

ME 435-0013

SHEET 7

FORM 925-M REV. 1-61



VIEW A-A
ROTATED 90° CCW

(1.) SURFACE ROUGHNESS 63 PER MIL-STD-10 (METAL SURFACES ONLY).

(2.) TO BE FLAT WITHIN 0.010 T.I.R.

3. ~~THIS CONNECTOR LOCATION TO BE SPECIFIED AT A LATER DATE (2 EACH, 38 PINS REQUIRED).~~

4. EXAMPLE: ME 435-0013-0030 WILL PROCURE A ~~MODEL "B"~~ DATA STORAGE EQUIPMENT, CONFORMING TO SPECIFICATION MC435-0013.

(5.) UNIT IDENTIFICATION CHARACTERS TO BE 1/4 INCH HIGH.

(6.) CONNECTOR REFERENCE DESIGNATION CHARACTERS TO BE 5/32 INCH HIGH.

7. ~~ALL CONNECTOR MOUNTING HARDWARE TO BE PLUGH.~~

8. ~~PARCH CONNECTOR LOCATION TO BE SPECIFIED AT A LATER DATE.~~

(9.) CAPTIVATION DESIGN TO BE APPROVED BY NAA.

10. ~~ELAPSED TIME METER LOCATION TO BE SPECIFIED AT A LATER DATE IF REQUIRED.~~

REVISED (K) SEE SH 1 Ltr 12-16-64 (L) SEE SH 1 Ltr 4-9-65 (M) SEE REV. LTR. SHT. 1 DATED 6-23-65 (N) SEE SHT 1 9-28-65 (P) SHT 1 9-28-65 (R) SEE SHT 1 1-10-66 (S) SEE SHT 1 4-11-66 NDS

TOLERANCES, EXCEPT AS NOTED			DRILLED				√ SIGNIFIES
FRACTIONS ± 1/32	.XX = ± .03		HOLE	.040 TO .1285: + .002, — .001		33/64 TO 3/4: + .005, — .001	SURFACE ROUGHNESS
ANGLES ± 1/2°	DECIMALS .XXX = ± .010		TOLERANCES	.136 TO .228: + .003, — .001		49/64 TO 1: + .007, — .001	PER MIL-STD-10
				.234 TO 1/2: + .004, — .001		1-1/64 TO 2: + .010, — .001	

DR	C.E. SIMMONS	12-16-64	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION 12214 LAKEWOOD BLVD. DOWNEY, CALIFORNIA	CONTROL PART
CHK		1-22-65		
APPD		1/27/65	DATA STORAGE EQUIPMENT (SPEC CONTROL DRAWING)	ME 435-0013
APPD		2-4-65		SHEET 8

FORM 923-M REV. 1-61

(11) THESE SURFACES TO BE PAINTED PER FED-STD-595, COLOR LIGHT BLUE NO. 35622, EXCEPT COVER FASTENING SCREWS.

~~(12) HARNESS SHALL ALLOW CONNECTOR TO TRAVEL ON GUIDE BUSHINGS UNTIL TRAVEL IS RESTRICTED BY BUSHING FLANGE.~~

(13) HARNESS SHALL ALLOW PLUS AND MINUS .18 MINIMUM CONNECTOR TRAVEL FROM THIS DIMENSION AND .12 MINIMUM RADIAL CONNECTOR MOVEMENT WHEN THE CENTER LINE OF THE JACKSCREW IS ALIGNED WITH THE CENTERLINE OF THE CONNECTOR ACCESS HOLE. THE HARNESS SHALL BE SECURED SO THAT INTERPOSITIONING OF CONNECTORS SHALL NOT BE POSSIBLE.

(14) FOR HANDLING AND SHIPPING, A REMOVEABLE MEANS OF RESTRAINING THE CONNECTORS WITHIN THE OUTLINE DIMENSIONS SHALL BE PROVIDED.

(15) A CONTACT SHALL BE INSTALLED IN EACH CONTACT HOLE IN EACH CONNECTOR.

(P-40 CONNECTOR ME 414-0115-0001 MAY BE SUBSTITUTED FOR CONNECTOR ME 414-0270-2001.)

(P-41 CONNECTOR ME 414-0113-0001 MAY BE SUBSTITUTED FOR CONNECTOR ME 414-0266-2001.)

(J-43 & J-44 CONNECTOR ME 414-0111-0002 MAY BE SUBSTITUTED FOR CONNECTOR ME 414-0263-2001.)

DASH NO.	*** I & T	*MODEL	**TYPE	DEVIATIONS	CONNECTOR CHART
-0001	T_S	E	I	1	A
-0010	T_S	E	I	2	A
-0011	T_S	E	I	3	A
-0013	T_S	E	I	4	A
-0020	T_S	D	II	5	(21) C (20)
-0030	T_S		II	10	(21) C (20)
-0042	T_S	D	II	6	B
-0043	T_S	D	II	7	B
-0044	T_S	D	II	8	B
-0040	T_S	D	II	9	(21) C (20)
-0035	T_S	D	II		(21) C (20)

* PER MC999-0023
** PER MC435-0013

*** I&T IDENTIFICATION & TRACEABILITY
T_S TRACEABILITY BY SERIALIZATION

CONNECTOR SCD CHART

CONNECTOR REF. DESIGNATOR	A – CONNECTOR (15)	B CONNECTOR (15)	B CONTACT
C28-1A4 P40	ME 414-0270-2001	ME 414-0270-3001	ME 418-0013-1001
C28-1A4 P41	ME 414-0266-2001	ME 414-0266-3001	ME 418-0011- (16)
C28-1A4 J43	ME 414-0263-2001	ME 414-0263-3001	ME 418-0010- (16)
C28-1A4 J44	ME 414-0263-2001	ME 414-0263-3001	ME 418-0010- (16)

CONNECTOR SCD CHART (CONT)

CONNECTOR REF. DESIGNATOR	C CONNECTOR (15)	C CONTACT	INTERFACE SEAL
C28-1A4 P40	ME 414-0270-3001	ME 418-0013-1001	ME 261-0012-0006
C28-1A4 P41	ME 414-0266-3001	ME 418-0011- (16)	ME 261-0012-0004
C28-1A4 J43	ME 414-0263-3001	ME 418-0010- (16)	— —
C28-1A4 P44	ME 414-0263-3001	ME 418-0010- (16)	— —

(16) ~~THESE CONNECTORS SHALL INCORPORATE THE EQUIPMENT MANUFACTURERS HUMIDITY FIX TO COMPLY WITH PARAGRAPH 3.5.6 OF ME 435-0013.~~

(17) ~~ONE WIRE ONLY MAY BE INSERTED IN EACH CONTACT.~~

(18) DASH NO. FOR PROPER QUALITY LEVEL CONTACT OF CORRECT WIRE SIZE SHALL BE INSTALLED AS SPECIFIED ON THE CONTACT SCD.

(19) ~~THE SPECIFIED CONNECTORS OR THEIR EQUIVALENTS, WHICHEVER ARE USED IN THE EQUIPMENTS WHICH UNDERGO QUALIFICATION TEST, SHALL BE USED IN ALL -0030 EQUIPMENTS.~~

REVISED (K) SEE SHT 1 12-16-64 KHB (L) SEE SHT 1 4-9-65 KHB (M) SEE REV. NOC. SHT. M" DATED 6-23-65 (N) SEE SHT 1 9-20-65 KHB (P) SEE SHT 1 9-21-65 (R) SEE SHT 1 11-10-66 (S) SEE SHT 1 4-22-66 WDS

TOLERANCES, EXCEPT AS NOTED					✓ SIGNIFIES
FRACTIONS ± 1/32	XX = ± .08	DRILLED	.060 TO .1285: + .002, — .001	33/64 TO 3/4: + .005, — .001	SURFACE ROUGHNESS
ANGLES ± 1/2°	DECIMALS .XXX = ± .010	HOLE	.1285 TO .250: + .003, — .000	49/64 TO 1: + .007, — .001	PER MIL - STD - 10
		TOLERANCES	.250 TO 1/2: + .004, — .001	1-1/64 TO 2: + .010, — .001	

DR	C. E. Simmons	12-16-64	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION 12214 LAKEWOOD BLVD. DOWNEY, CALIFORNIA	CONTROL PART
CHK				
APPD	J Sapp		DATA STORAGE EQUIPMENT	ME 435-0013
APPD			(SPEC CONTROL DRAWING)	SHEET 9

FORM 935-m REV. 1-61

(20) POTTING OF EXTERNAL MULTIPIN CONNECTORS SHALL BE IN ACCORDANCE WITH SPECIFICATION MA0606-025.

(21) HUMIDITY SEALS INCORPORATING MINIMUM SLOPE AND MAXIMUM CORNER RADII SHALL BE INSTALLED ON J-43 AND J-44 AND SUPPLIED FOR USE ON ELAPSED TIME INDICATOR JACKS. MOUNTING HARDWARE FOR SEALS SHALL BE FLUSH OR RECESSED. THE SEALS AND MOUNTING HARDWARE SHALL NOT PROTRUDE BEYOND THE OUTLINE DIMENSIONS.

(22) THE FOLLOWING CONNECTOR PIN ASSIGNMENTS SHALL BE SUBSTITUTED FOR THOSE INDICATED ON SHEET 12 OF THIS SCD FOR ME435-0013-0001, -0010, -0011, AND -C013.

	TERM	FUNCTION
P41		
	14	SPARE
	15	SPARE
	32	SPARE

(23) THE FOLLOWING CONNECTOR PIN ASSIGNMENTS SHALL BE SUBSTITUTED FOR THOSE INDICATED ON SHEET 12 OF THIS SCD FOR ME435-0013-0001, -0010, AND -0011.

	TERM	FUNCTION
P41		
	20	OFF MODE CONTROL
	35	STOP CONTROL

(24) THE FOLLOWING CONNECTOR PIN ASSIGNMENTS SHALL BE SUBSTITUTED FOR THOSE INDICATED ON SHEET 12 OF THIS SCD FOR ME435-0013-0010.

	TERM	FUNCTION
P41		
	18	MODE CONTROL COMMON
	22	NORMAL FORWARD CONTROL
	33	SPARE
	34	SPARE
	37	TRANSPORT CONTROL COMMON
	38	FAST REVERSE CONTROL
	39	FAST FORWARD CONTROL
	40	NORMAL REVERSE CONTROL
	74	SPARE
	92	SPARE

THE FOLLOWING DEVIATIONS SHALL APPLY AS INDICATED IN THE SCD DASH NUMBER BLOCK:

(4)(3)(2)(1) ELECTRICAL CONDUCTIVITY IS REQUIRED AT MOUNTING POINTS ONLY.

(3)(2)(1) UNIT IS EXEMPT FROM FLATNESS REQUIREMENT OVER COLDPLATE AREA.

(3)(2)(1) ACCESS CONNECTORS ARE NOT REQUIRED, TEST POINTS SHALL BE AVAILABLE ON P41.

(2) UNIT IS EXEMPT FROM THE CONTROLS REQUIREMENTS OF PARAGRAPHS 3.3.1 AND 3.5.2.1 THROUGH 3.5.2.4.

(4)(3)(2)(1) ELAPSED TIME INDICATOR IS NOT REQUIRED.

(6)(3)(2)(1) UNIT IS EXEMPT FROM REQUIREMENTS OF PARAGRAPH 3.5.4.5.4.

(6)(4)(3)(2)(1) EXCEPT AS DEVIATED HEREIN, AND ON THE NAA/S&ID APPROVED ACCEPTANCE TEST DATA SHEET, DESIGN REQUIREMENTS SHALL BE IN ACCORDANCE WITH THIS SCD AND MC435-0013. DEVIATIONS OTHER THAN THOSE SPECIFIED THAT ARE REQUIRED DURING INSPECTION OR TEST, SHALL BE APPROVED BY AN AUTHORIZED NAA/S&ID ENGINEERING REPRESENTATIVE (NAA/S&ID RESIDENT ENGINEERING REPRESENTATIVE OR NAA/S&ID RESPONSIBLE EQUIPMENT ENGINEER).

(3)(2)(1) THE SOLDERING REQUIREMENTS OF MSFC-PROC-156A AS AMENDED SHALL NOT BE APPLICABLE. EQUIPMENTS SHALL BE SOLDERED IN ACCORDANCE WITH THE SUBCONTRACTORS SOLDERING SPECIFICATION AR-519-1, EXCEPT THAT SECTION 3, ENVIRONMENTAL CONTROL WILL NOT APPLY.

(1)(7)(6)(5)(2)(3)(4) PARAGRAPH 3.4.2.6 OF SPECIFICATION MC999-0023 AS APPLICABLE TO PARAGRAPHS 3.1 AND 3.10 OF SPECIFICATION MC435-0013 SHALL BE WAIVED.

(1)(6)(2)(3)(4)(5) PARAGRAPH 3.4.3.2.3 OF SPECIFICATION MC999-0023 AS APPLICABLE TO PARAGRAPH 3.5.5 OF SPECIFICATION MC435-0013 SHALL BE WAIVED.

(8)(7)(6)(9)(10) PARAGRAPH 4.2.2 OF SPECIFICATION MC999-0023 AS APPLICABLE TO PARAGRAPH 4.1 OF SPECIFICATION MC435-0013 SHALL BE WAIVED.

(9) ADD TO PARAGRAPH 4.3.3.1.6 BURN IN OF SPECIFICATION MC999-0023 AS APPLICABLE TO PARAGRAPH 4.1 GENERAL REQUIREMENTS OF SPECIFICATION MC435-0013: AN ACCUMULATION OF A MAXIMUM OF 200 OPERATING HOURS IS ACCEPTABLE.

REVISED (W) 9-20-65 RLB SEE SHT 1 | (R) 1-10-66 SEE SHT 1 | (S) SEE SHT 1 4-13-66 SDN

E.O. 490133

TOLERANCES, EXCEPT AS NOTED	TOLERANCES ON HOLES NOTED "DRILL"	CODE IDENT NO.
ANGLES ±30′ DECIMALS .XX = ±.03 .XXX = ±.010	.013 THRU .040 : +.001 −.001 .041 THRU .130 : +.002 −.001 .131 THRU .229 : +.003 −.001 .230 THRU .500 : +.004 −.001 .501 THRU .750 : +.005 −.001 .751 THRU 1.000 : +.007 −.001 1.001 THRU 2.000 : +.010 −.001	03953

DR BY	C. E. Simmons	12-16-64
CHK BY		
APPD		
APPD		

NORTH AMERICAN AVIATION, INC.
SPACE and INFORMATION SYSTEMS DIVISION
12214 LAKEWOOD BLVD., DOWNEY, CALIFORNIA

DATA STORAGE EQUIPMENT

(SPEC CONTROL DRAWING)

CONTROL PART

ME435-0013

SHEET 10

FORM 923-M REV 4-66

CONNECTORS SPECIFIED HEREIN SHALL BE WIRED IN ACCORDANCE WITH THE FOLLOWING:

TERM	FUNCTION
P40	PLUG, DATA STORAGE (C28-1A4P40)
1	SPARE
2	SPARE
3	DSE AC PWR PH A BUS-3
4	SPARE
5	SPARE
6	SPARE
7	DSE AC PWR NEUT (GRD)
8	DSE AC PWR PH C BUS-3
9	SPARE
10	SPARE
11	DSE AC PWR PH B BUS-3
12	SPARE

REVISED
J GEN REV 7-18-64 PR
K SEE SHT. 1 C.E.P. 12-16-64
L SEE SHT. 1 KNB 4-9-65
M SEE REV. NOS. SHTS. MAY DATED 6-23-65 MM
N SEE SHT. 1 9-20-65 KNB
P SEE SHT. 1 9-29-65 MM
R SEE SHT. 1 10-26-65 MM
S SEE SHT. 1 9-22-66 MM

TOLERANCES, EXCEPT AS NOTED		DRILLED	.040 TO .1285: ± .002, — .001	33/64 TO 3/4: ± .005, — .001	✓ SIGNIFIES
FRACTIONS ± 1/32 DECIMALS .XX = ± .03		HOLE	.136 TO .228: ± .003, — .001	49/64 TO 1: ± .007, — .001	SURFACE ROUGHNESS
ANGLES ± 1/2	.XXX = ± .010	TOLERANCES	.234 TO 1/2: ± .004, — .001	1-1/64 TO 2: ± .010, — .001	PER MIL - STD - 10

DR	F. Rojas	JUNE 15 1964	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION 12214 LAKEWOOD BLVD. DOWNEY, CALIFORNIA	CONTROL PART
CHK				
APPD			DATA STORAGE EQUIPMENT	ME 435-0013
APPD				
APPD			SPECIFICATION CONTROL DRAWING	SHEET 11

FORM 9730 - NEW 10-63

TERM	FUNCTION	TERM	FUNCTION
P41	PLUG, DATA STORAGE (C28-1A6P41)		
1	INTERCOM TO DSE SIG	67	CLOCK OUTPUT (FOR GSE)
2	INTERCOM TO DSE RET	68	CLOCK OUTPUT RSTURN (FOR GSE)
3	PMP ALG SIG 1 TO DSE	69	SPARE
4	PMP ALG SIG 2 TO DSE	70	SPARE
5	PMP ALG SIG 3 TO DSE	71	SPARE
6	PMP ALG SIG 4 TO DSE	72	SPARE
7	PMP ALG SIG 5 TO DSE	73	SPARE
8	SPARE	74 (24)	FWD PWR ON CONT
9	SPARE	75	PMP ALG SIG 6 RET
10	SPARE	76	SPARE
11	SPARE	77	PMP ALG SIG 7 RET
12	SPARE	.o	SPARE
13	SPARE	79	PMP ALG SIG 8 RET
14 (22)	SPEED ASSUR HI CONT	80	SPARE
15 (22)	SPEED ASSUR LO CONT	81	PMP ALG SIG 9 RET
16	PLUS 28VDC INPUT	82	SPARE
17	PLUS 28VDC RETURN	83	SPARE
18 (24)	JUMPER TO #16 (INTERNAL USE ONLY)	84	PCM DATA TO DSE
19	RECORD PWR ON CONT	85	PCM DATA TO DSE SHLD
20 (23)	SPARE	86	SPARE
21	PLAYBACK PWR ON CONT	87	SPARE
22 (24)	SPARE	88	SPARE
23	INTERCOM TO DSE SHLD	89	SPARE
24	DSE TO INTERCOM SIG	90	SPARE
25	PMP ALG SIG 1 RET	91	SPARE
26	PMP ALG SIG 2 RET	92 (24)	REV PWR ON CONT
27	PMP ALG SIG 3 RET	93	DSE ALG SIG 1 TO PMP
28	PMP ALG SIG 4 RET	94	DSE ALG SIG 2 TO PMP
29	PMP ALG SIG 5 RET	95	DSE ALG SIG 3 TO PMP
30	SIGNAL COMMON (INTERNAL USE ONLY)	96	DSE ALG SIG 4 TO PMP
31	SPARE	97	DSE ALG SIG 5 TO PMP
32 (22)	LOW SPEED CONT	98	DSE ALG SIG 6 TO PMP
33 (24)	NORMAL SPEED CONT	99	DSE ALG SIG 7 TO PMP
34 (24)	HIGH SPEED CONT	100	DSE ALG SIG 8 TO PMP
35 (23)	SPARE	101	DSE ALG SIG 9 TO PMP
36	SPARE	102	DATA RATE T RETURN
37 (24)	SPARE	103	PCM DATA TO DSE RET
38 (24)	SPARE	104	PCM DATA TO PMP
39 (24)	SPARE	105	SPARE
40 (24)	SPARE	106	SPARE
41	SPARE	107	SPARE
42	DSE TO INTERCOM RET	108	SPARE
43	DSE TO INTERCOM SHLD	109	SPARE
44	SPARE	110	SPARE
45	SPARE	111	DSE ALG SIG 1 RET
46	SPARE	112	DSE ALG SIG 2 RET
47	SPARE	113	DSE ALG SIG 3 RET
48	SPARE	114	DSE ALG SIG 4 RET
49	SPARE	115	DSE ALG SIG 5 RET
50	SPARE	116	DSE ALG SIG 6 RET
51	SPARE	117	DSE ALG SIG 7 RET
52	SPARE	118	DSE ALG SIG 8 RET
53	SPARE	119	DSE ALG SIG 9 RET
54	SPARE	120	SPARE
55	SPARE	121	TAPE MOTOR SENS
56	DSE CHASSIS GRD	122	TAPE MOTOR SENS
57	SIGNAL COMMON (INTERNAL USE ONLY)	123	DATA RATE T SIG
58	DSE SHLD GRD	124	DATA RATE T SHLD
59	PMP ALG SIG 6 TO DSE	125	PCM DATA TO PMP RET
60	SPARE	126	PCM DATA TO PMP SHLD
61	PMP ALG SIG 7 TO DSE	127	SPARE
62	SPARE	128	SPARE
63	PMP ALG SIG 8 TO DSE	129	SPARE
64	SPARE	130	SPARE
65	PMP ALG SIG 9 TO DSE	131	SPARE
66	SIGNAL COMMON (INTERNAL USE ONLY)	132	SPARE

REVISED (J) GEN REV 9-18-64 FL
(K) SEE SHT 1 12-16-64
(L) SEE SHT 1
(M) SEE REV. NOT. SHT. 1
(N) SEE SHT 1
(P) SEE SHT 1 LTR 4-12-66
(R) SEE SHT 1 LTR 4-12-66
(S) SEE SHT 1 4-12-66 NDS

TOLERANCES, EXCEPT AS NOTED			DRILLED	.040 TO .1285: ± .002, — .001	33/64 TO 3/4: ± .005, — .001	. SIGNIFIES
FRACTIONS ± 1/32	DECIMALS .XX = ± .03		HOLE	.136 TO .228: ± .003, — .001	49/64 TO 1: ± .007, — .001	SURFACE ROUGHNESS
ANGLES ± 1/2°		.XXX = ± .010	TOLERANCES	.234 TO 1/2: ± .004, — .001	1-1/64 TO 2: ± .010, — .001	PER MIL - STD - 10

DR	F. Rojas	JUNE 15 1964
CHK		
APPD		
APPD		
APPD		

NORTH AMERICAN AVIATION, INC.
SPACE and INFORMATION SYSTEMS DIVISION
12214 LAKEWOOD BLVD. DOWNEY, CALIFORNIA

DATA STORAGE EQUIPMENT

SPECIFICATION CONTROL DRAWING

CONTROL PART

ME 435-0013

SHEET 12

FORM 9730 - NEW 10-63

TERM	FUNCTION
J43	JACK, STORAGE (C28-1A4J43)
1	ID COM
2	PCM NRZ INPUT
3	DATA RATE CLOCK INPUT
4	DIG PLAYBACK AMP NO 1
5	DIG RECORD AMP NO.2 INPUT
6	DIG RECORD AMP NO.1 INPUT
7	DIG RECORD HEAD 1A
8	DIG RECORD HEAD 1B
9	END OF TAPE REV.
10	PCM NRZ INPUT RET
11	DATA RATE CLOCK RET
12	DIG PLAYBACK AMP NO 2
13	DIG RECORD AMP NO.3 INPUT
14	DIG RECORD HEAD 2A
15	DIG RECORD HEAD 2B
16	ID OPEN
17	PCM NRZ OUTPUT
18	END OF TAPE FWD
19	DIG PLAYBACK AMP NO 3
20	DIG RECORD HEAD 3A
21	DIG RECORD HEAD 3B
22	ID SHORT
23	PCM NRZ OUTPUT RET
24	END OF TAPE COMMON
25	DIG PLAYBACK AMP NO 4
26	DIG RECORD AMP NO.4 INPUT
27	DIG RECORD HEAD 4A
28	DIG RECORD HEAD 4B
29	ID SHORT
30	ID SHORT
31	SIG RET
32	DIG PLAYBACK AMP NO 5
33	SPARE
34	DIG RECORD AMP NO.5 INPUT
35	DIG RECORD HEAD 5A
36	DIG RECORD HEAD 5B
37	ID OPEN
38	ID SHORT

REVISED (J) GEN REV PER [illegible] (K) SEE SHT 1 12-8-64 (CR) (L) SEE SHT 1 12-8-64 (M) SEE REV. LTR., SHT "M" ENTIRE SHEET PER [illegible] (N) SEE SHT 1 [illegible] (P) SEE SHT 1 PER [illegible] (R) SEE SHT 1 11-13-65 (S) SEE SHT 1 4-17-66 NDS

TOLERANCES, EXCEPT AS NOTED									
FRACTIONS ± 1/32 DECIMALS .XX = ± .03	DRILLED	.040 TO .128:	+ .002, — .001	33/64 TO 3/4:	+ .005, — .001	. SIGNIFIES			
ANGLES ± 1/2° .XXX = ± .010	HOLE	.136 TO .228:	+ .003, — .001	49/64 TO 1:	+ .007, — .001	SURFACE ROUGHNESS			
	TOLERANCES	.234 TO 1/2:	+ .004, — .001	1-1/64 TO 2:	+ .010, — .001	PER MIL - STD - 10			

DR	F. Rojas	JUNE 15 1964	NORTH AMERICAN AVIATION, INC. INFORMATION SYSTEMS DIVISION 8437 LAKEWOOD BLVD., DOWNEY, CALIFORNIA	CONTROL PART
CHK	[signature]	12-22-65		
APPD				
APPD	[signature]		DATA STORAGE EQUIPMENT	ME 435-0013
APPD	[signature]	1-4-65	SPECIFICATION CONTROL DRAWING	SHEET 13

FORM 9730 - REV 10-63 @+

TERM	FUNCTION
J44	JACK, DATA STORAGE (C28-1A4J44)
1	ID COM
2	PLUS 14.5VDC UNREG PS
3	PLUS 34.5VDC UNREG PS
4	MINUS 7.5VDC UNREG PS
5	ALG 1 RECORD HEAD CUR
6	ALG 2 RECORD HEAD CUR
7	ALG 3 RECORD HEAD CUR
8	ALG 4 RECORD HEAD CUR
9	PLUS 12.0VDC REG
10	MINUS 5.0VDC REG
11	PLUS 28VDC UNREG SUP VOLT
12	PLUS 28V RET
13	ALG 5 RECORD HEAD CUR
14	ALG 6 RECORD HEAD CUR
15	ALG 7 RECORD HEAD CUR
16	ID OPEN
17	ALG 1 PLYBK AMPL OUPT
18	ERASE MONITOR FORWARD
19	ERASE MONITOR REVERSE
20	ALG 8 RECORD HEAD CUR
21	ALG 9 RECORD HEAD CUR
22	ID SHORT
23	ALG 2 PLYBK AMPL OUPT
24	ALG 3 PLYBK AMPL OUPT
25	ALG 4 PLYBK AMPL OUPT
26	ALG 5 PLYBK AMPL OUPT
27	TAPE MOTION MONITOR
28	SPARE
29	ID SHORT
30	ID SHORT
31	ALG 6 PLYBK AMPL OUPT
32	ALG 7 PLYBK AMPL OUPT
33	ALG 8 PLYBK AMPL OUPT
34	ALG 9 PLYBK AMPL OUPT
35	SIG COM
36	BIAS MONITOR
37	ID SHORT
38	ID SHORT

REVISED (J) GEN REV 11-28-64 PR | (K) SEE SHT 1 12-16-64 | (L) SEE SHT 1 11-9-65 | (M) SEE REV. NEG. SHT. M" DATED 6-23-65 NOT | (N) SEE SHT 1 9-20-65 AND | (P) SEE SHT 1 MASTER | (R) SEE SHT 1 1-10-66 | (S) SEE SHT 1 4-22-66 NOS

E.O. 490133

TOLERANCES, EXCEPT AS NOTED			DRILLED	.040 TO .128: ± .002, — .001	33/64 TO 3/4: ± .005, — .001	✓ SIGNIFIES
FRACTIONS ± 1/32	DECIMALS .XX = ± .03		HOLE	.136 TO .228: ± .003, — .001	49/64 TO 1: ± .007, — .001	SURFACE ROUGHNESS
ANGLES ± 1/2°	.XXX = ± .010		TOLERANCES	.234 TO 1/2: ± .004, — .001	1-1/64 TO 2: ± .010, — .001	PER MIL - STD - 10

DR	F. Rojas	JUNE 15 1964
CHK		
APPD		
APPD		
APPD		

NORTH AMERICAN AVIATION, INC.
SPACE and INFORMATION SYSTEMS DIVISION
12214 LAKEWOOD BLVD., DOWNEY, CALIFORNIA

DATA STORAGE EQUIPMENT

SPECIFICATION CONTROL DRAWING

CONTROL PART

ME 435-0013

SHEET 14

FORM 973Q - NEW 10-63 P+